

Title (en)  
Solid oxide fuel cell and fuel cell system

Title (de)  
Feststoffoxidbrennstoffzelle und Brennstoffzellensystem

Title (fr)  
Pile à combustible à oxyde solide et système de piles à combustible

Publication  
**EP 2731185 A3 20140618 (EN)**

Application  
**EP 13191802 A 20131106**

Priority  
JP 2012245706 A 20121107

Abstract (en)  
[origin: EP2731185A2] The compact fuel cell which can efficiently perform heating and can be repeatedly used includes a solid electrolyte 3, an anode 4 that is formed on one surface of the solid electrolyte 3, a cathode 2 that is formed on another surface of the solid electrolyte 3, an anode fuel material 5, a heating portion 7 for heating and maintaining the solid electrolyte 3 and the anode fuel material 5 at a temperature equal to or higher than a predetermined level, and a sealing portion 16 that is installed in the solid electrolyte 3, forms a sealed space 13 sealing the anode 4 and the anode fuel material 5 together with the solid electrolyte 3 and the heating portion 7, and can repeatedly open and close, in which a helium leak rate of the sealed space 13 is maintained at  $1 \times 10^{-2}$  Pa·m<sup>3</sup>/sec or a lower rate.

IPC 8 full level  
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CPC (source: CN EP US)  
**H01M 8/004** (2013.01 - CN EP US); **H01M 8/006** (2013.01 - CN); **H01M 8/0271** (2013.01 - CN EP US); **H01M 8/0278** (2013.01 - CN EP US); **H01M 8/04007** (2013.01 - CN); **H01M 8/124** (2013.01 - EP US); **H01M 8/1246** (2013.01 - CN EP US); **H01M 8/1253** (2013.01 - EP US); **H01M 8/126** (2013.01 - EP US); **H01M 8/1266** (2013.01 - EP US); **H01M 8/2425** (2013.01 - CN); **H01M 8/243** (2013.01 - CN EP US); **H01M 8/12** (2013.01 - EP US); **H01M 2008/1293** (2013.01 - CN); **Y02E 60/50** (2013.01 - EP US); **Y02P 70/50** (2015.11 - EP US)

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• [Y] EP 1325774 A1 20030709 - NIPPON STEEL CORP [JP]  
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Designated contracting state (EPC)  
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Designated extension state (EPC)  
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DOCDB simple family (publication)  
**EP 2731185 A2 20140514**; **EP 2731185 A3 20140618**; **EP 2731185 B1 20170614**; CN 103811688 A 20140521; CN 103811688 B 20170912; ES 2634062 T3 20170926; JP 2014096223 A 20140522; JP 5210450 B1 20130612; US 2014127599 A1 20140508; US 9882226 B2 20180130

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**EP 13191802 A 20131106**; CN 201310549157 A 20131107; ES 13191802 T 20131106; JP 2012245706 A 20121107; US 201314072300 A 20131105